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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/564,892

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Moon-Soo Han

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STEIN, MCEWEN & BUI, LLP
1400 EYE STREET, NW
SUITE 300
WASHINGTON, DC 20005

EXAMINER

PENDLETON, DIONNE

ART UNIT

PAPER NUMBER

2627

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/564,892	Applicant(s) HAN, MOON-SOO	
	Examiner DIONNE H. PENDLETON	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/17/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :-----> 1/17/06.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. **Claims 1-6 and 9** are rejected under 35 U.S.C. 102(b) as being anticipated by **Nakatsu (Patent Number 4,955,009)**.

Regarding claim 1,

Nakatsu teaches an apparatus for performing track jumping in consideration of a position of a pickup, the apparatus comprising:

a pickup (**“6” in figure 2**) reading a signal from an optical disc;

an RF processing unit (**“7”, “11”, “12” and “50” in figure 2**) outputting an error signal controlling the pickup by shaping and amplifying the signal transmitted from the pickup;

a servo (**“60”**) judging a position of the pickup based on the error signal output from the RF processing unit and outputting a track jump start/end control signal (**“60” corrects velocity of the servo based on a comparison between reference velocity and actual velocity; output of circuit “15” interpreted as “error signal”, see Column 5:22-31**);

and a driver (**"5" in figure 2**) moving the position of the pickup using the track jump start/end control signal output from the servo.

Regarding claim 2,

Nakatsu teaches the apparatus of claim 1, wherein: where the position of the pickup judged by the error signal output from the RF processing unit is within a reference range, the servo outputs a predetermined voltage for the track jump start/end control to the driver (**column 5:35-40,55-58 discloses that once pickup is at midpoint of track, the pulse which as been generated for causing a delay in track accessing is no longer generated and the "jump" commences**).

Regarding claim 3,

Nakatsu teaches the apparatus of claim 1, wherein: where the position of the pickup judged by the error signal output from the RF processing unit is not within the reference range, the servo cuts off the predetermined voltage for the track jump start/end control output to the driver until the position of the pickup is within the reference range (**the "masking pulse" is provided until the pickup moves from a non-center location to the center location of the track, see column 5:45-50. Said "masking pulse" has been interpreted as corresponding to the "cut off" voltage for track jump start/end control voltage**).

Regarding claim 4,

Nakatsu teaches a method of performing track jumping in consideration of a position of a pickup, the method comprising:

outputting an error signal **(see output of “15” in figure 2)** controlling the pickup by shaping and amplifying an optical disc signal transmitted from the pickup **(column 5:22-31);**

judging a position of the pickup from the error signal when a track jump is performed and outputting a track jump start/end control signal for the pickup **(see track access command “S14”, also see column 5:1-3 and 19-31);**

and moving the position of the pickup using the track jump start/end control signal **(column 6:22-26).**

Regarding claim 5,

Nakatsu teaches the method of claim 4, wherein: where the position of the pickup judged by the error signal is within a reference range, the outputting of the track jump start/end control signal comprises outputting a predetermined voltage; and where the position of the pickup judged by the error signal is not within the reference range, the outputting of the track jump start/end control signal comprises cutting off the predetermined voltage until the position of the pickup is within the reference range **(column 5:35-58).**

Regarding claim 6,

Nakatsu teaches an apparatus for performing track jumping of an optical pickup in an optical disc recording/reproducing apparatus, the apparatus comprising:

an RF processing unit (**“7”, “11”, “12” and “50” in figure 2**) generating a positional error signal based on an output signal of the optical pickup;

a servo (**“60” in figure 2**) judging a position of the pickup relative to a track of the optical disc based on the positional error signal, and outputting a control signal to control a position of the optical pickup based on the judged position;

a driver (**“5” in figure 2**) controlling the position of the pickup using the control signal output;

and a controller (**column 1:46-48**) monitoring the control signal and controlling the track jumping based on the control signal,

wherein: where the controller determines that the control signal represents that the position of the optical pickup is within a predetermined range of a center of the track, the controller immediately outputs an additional signal to the driver to perform the track jump (**column 5:35-40, 55-58**), and where the controller determines that the control signal represents that the position of the optical pickup is not within the predetermined range, the controller delays outputting the additional signal to the driver until the control signal represents that the position of the optical pickup is within the predetermined range of the track center (**column 5:45-50**).

Regarding claim 9,

Nakatsu teaches a method of controlling track jumping of an optical pickup relative to an eccentrically rotating track of an optical disc, the method comprising:

judging whether a position of the pickup is within a predetermined range relative to a center of the track at a time of a track jump command **(column 5:35-40, 55-58);**

immediately outputting the track jump command to the optical pickup if the pickup is within the predetermined range **(column 5:59-column 6:31 discusses no longer masking jump pulse);**

and delaying the outputting of the track jump command if the pickup is not within the predetermined range **(column 5:45-51 clearly discloses delay of jump while beam spot is moving to within a range of the track's center).**

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 7-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nakatsu (Patent Number 4,955,009)** in view of **Ceshkovsky (Patent Number Re. 32,574)**

Regarding claim 7,

NAKATSU teaches the apparatus of claim 6.

Nakatsu does not explicitly teach that the controller calculates an amount of the track jump and calculates a duration of the additional voltage based on the calculated amount of the track jump.

CESHKOVSKY teaches that drive voltage may be applied as a function of distance of travel between tracks **(column 6:45-60 and column 10:29-51)**.

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of NAKATSU and CESHKOVSKY, therein calculating drive voltages as a function of track jump, as claimed, since to do so is a known technique in the art and would yield predictable results such as tailoring the drive signal according to the distance between tracks to travel.

Regarding claim 8,

Ceshkovsky teaches the apparatus of claim 6, wherein: the controller removes the additional voltage when the pickup has completed the track jump **(column 6:61-column 7:8)**.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIONNE H. PENDLETON whose telephone number is (571)272-7497. The examiner can normally be reached on 10:30-7:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dionne H Pendleton/
Examiner, Art Unit 2627

/Wayne R. Young/
Supervisory Patent Examiner, Art Unit 2627